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15 November 1957

### THE STIMULATION OF INNOVATION

1. Background: During the past three years the view has been expressed authoritatively, both in internal studies and by the various committees that have reviewed the Agency's operations from outside, that the Agency could derive really significant benefits from the more aggressive invention, development, and exploitation of advanced technology, of fresh approaches to the Agency's tasks, and of new operational concepts. At the same time the Inspector General has pointed to the present wide diffusion in the Agency of responsibility for research and development and has urged that these activities be centrally monitored and controlled in order to bring the resources of science and technology more effectively to bear on primary objectives. In recent discussions within the Agency of the means of achieving this objective, broad decisions are assumed to have been taken to the effect that an important effort should be made to achieve new break-throughs, that research and development should be focused in a more orderly fashion on this task, and that a major grant of authority should be made to a senior officer of the Agency to accomplish this purpose. The intent of this paper is to propose specific actions to be taken at this time as the first steps in giving effect to the foregoing decisions.

2. Approach - Organization: It is difficult to foresee now, before a start has been made, what permanent changes (if any) in the organization of the Agency will eventually seem desirable to accomplish the broad purposes set forth above. Moreover, reorganizations are time-consuming and time is of the essence. Accordingly, it is believed that there should be an absolute minimum of reorganization at this time. The initial move should be a broad grant of authority to an officer reporting directly to the DCI and the D/DCI to direct appropriate action in the whole field of research and development by existing components of the Agency, which should be left, at least for the time being, within their present administrative framework. This officer should then make a start on the substantive task of stimulating vigorously the new things that ought to be done and directing effort away from any less necessary or less promising things that are now being done. He

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should study the problem of organization as the substantive work goes forward and organizational changes should be made if and when the need for them becomes clear. The following comments will serve to explain in part how it is proposed that the incumbent of the new position, who will be referred to herein as the Special Assistant for Planning and Development should operate.

a. Although it will certainly be possible (given reasonable goodwill throughout the Agency) to attack the real substantive problems without first doing a great deal of reorganizing (and although it may well turn out in the end that major permanent changes in organization are quite unnecessary) the SA/PD will not be able to do even a part of what is expected of him without adequate authority. He cannot have the authority in his own hands to cause the switching of personnel slots or money away from activities other than those (primarily research and development) for which he is responsible. But he must have the authority to modify burdensome administrative and other procedures and on occasion to employ unorthodox ones. In particular, he must have real authority to act within his acknowledged field without restrictive requirements for coordination.

b. If the approach here proposed is to work, and if the new SA/PD is to allocate his time and energy to the tasks discussed at greater length below, he will have to select certain projects and activities as those particularly meriting his attention and confine his attention to them. There will be considerable research and development work to which he can pay little attention and he will not be able to concern himself greatly with the day-to-day management of any office. It should be made clear, therefore, that existing programs are to go forward except as the SA/PD may intervene, on his initiative, to modify them, and that the offices that are carrying on research and development should not hold up any but the most important decisions awaiting his approval.

c. Finally, it must be frankly admitted that the organizational approach here proposed will create an untidy situation (unless and until an orderly permanent reorganization is carried through). The heads of a number of offices will find themselves working for two

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masters; their regular superiors in the line of command and, with respect to research and development activities, the SA/PD in the Director's Office. Despite its untidiness on an organization chart, however, the proposed approach is believed to be perfectly workable with reasonable goodwill on the part of all concerned. The new authority granted to the SA/PD should be used not just to dilute established responsibilities by introducing yet another restrictive requirement for coordination and approval but to redirect efforts where necessary and above all to stimulate and facilitate promising undertakings. If it is so used, the required goodwill should be forthcoming.

3. Approach - Direction of Effort: In embarking upon the substantive task the SA/PD should, it is proposed, be guided by three rather general priorities in allocating his time and energies:

a. First, he should place primary emphasis on the opening up of fresh approaches and on stimulating fundamental reconsideration of needs and possibilities by experienced officers of the Agency. He should place only a very secondary emphasis (at least to begin with) on "tidying up" the Agency's research and development activities. To be sure, resources must be focused which means that the use of money and brains for relatively low priority tasks must be curtailed. But the urgent need is for more creativeness and imagination; tidying up can be done as time and energy are available.

b. Second, he should concentrate on the effort to bring about important innovations utilizing new concepts and to achieve major break-throughs. It should be a much lower priority task to provide the tools of the trade in support of existing and well-developed operational techniques and concepts. This is not to say that the latter task is unimportant or should be neglected. The point is that this task (the one for which, according to the Inspector General's report, TSS was established) is already being competently done. The new element that is needed is a continuous search,

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which should be both broader in scope and more radical in approach than the study of potential new tools, for whole new systems and new operational and organizational concepts.

c. Third, he should not regard his field of interest as being limited to research and development in a narrow and conventional sense but should assume responsibility as necessary and appropriate for the several kinds of activities that are involved in carrying through important innovations and making them operational. This will require him to be interested on occasion in procurement and production, in the provision of new kinds of human skills, in operational concepts and techniques (as already noted), and sometimes in the actual conduct of operations. What is here proposed is a deliberate departure when necessary from the standard military pattern (inevitable in a huge organization) with its sharp separation between research and development, procurement, and operations. Affirmatively, what is proposed is that two of the most important functions of the SA/PD should be (a) to achieve a really effective relationship between developers, operators, and (when intelligence collection is involved) consumers, and (b) to see to it that there is unity of command over a particular project when this is needed to drive through inter-related changes in tools, operational concepts, personnel, and organization. The reason for emphasizing these functions is, as [ ] pointed out (in his memorandum entitled Organization for the Exploitation of Advanced Technology), that the secret of success of more than one recent project has been "the unity and freedom of the command and the very close coupling between three major areas--research and development, operations, and the consumers' requirements--with the most candid interchange between the three."

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d. Lest the intent of the preceding paragraph be misunderstood, it may be useful to summarize the concept therein contained of the SA/PD's job. Obviously, it is not that the SA/PD should have responsibility for all research and development and for operations and various supporting activities as well (which would make him a second DCI). Equally emphatically, however, the concept is not that the dividing line between his field of responsibility

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and other domains should be the line separating all research and development from everything else that goes on in the Agency. This conventional line of separation, it is argued, is apt to inhibit the most effective and rapid flowering new ideas into fully operational practice. Accordingly, what is proposed is that the SA/PD should devote most of his attention to a limited number of projects for the development and exploitation of new approaches, selected because they hold promise of important advances. The area thus defined will encompass only a part of the research and development that is going on in the Agency but may well include support and operational activities from time to time, especially when an innovation requires operations and support of a sort that does not fit into the normal pattern.

4. Scope of Agency Interest: The scope of the whole effort here under discussion to invent and carry through important innovations must take account of, and will inevitably be limited by, the responsibilities of the CIA within the Government as a whole and within the intelligence community in particular. There is a certain danger that the distribution of responsibilities within the intelligence community (like the distribution of functions between the three military Services) will be outmoded by major changes in techniques and will, if interpreted too literally and taken too seriously, inhibit progress. Accordingly, it is believed that considerable freedom of action to undertake research and development is appropriate and should be acknowledged (at least within the Agency), especially freedom from a strict interpretation of the Agency's responsibilities within the intelligence community. Three areas are especially worthy of mentioning in this connection:

a. Two principal tasks of the Clandestine Service are the covert acquisition of intelligence and covert political action. Because many fascinating techniques have appeared in recent years for the collection of intelligence (e.g. radar, balloons, acoustical and infrared sensing devices), there has been a natural tendency to devote a vast amount of scientific imagination to the techniques of intelligence collection and relatively little to the techniques of political warfare. Although it is by no means certain that science has much to contribute to the art of political

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warfare or that freshness of approach in this activity is obtainable by any kind of research and development, this conclusion should certainly not be taken for granted. A serious attempt should be made to elicit new ideas.

b. Many of the promising new techniques for acquiring intelligence are (as mentioned above) techniques for the surveillance of denied areas. In their advanced form these typically fall outside of the normal pattern of Agency operations. They require different kinds of people and different locations from those we usually employ, and surveillance systems can be costly. Moreover, almost any kind of surveillance can be described as a means of obtaining early warning, which is claimed as a military responsibility. Finally, it is often difficult to decide whether a surveillance activity is covert or overt in character. In short, this is one of the situations in which the familiar jurisdictional definitions break down. It should be especially recognized, however, as a field in which the Agency will not be inhibited in the development and employment of new techniques. Indeed, there are persuasive reasons for believing that the Agency should pay more attention and devote more of its resources to strategic early warning than it has in the past.

c. Closely related to the jurisdictional vagueness surrounding the concept of surveillance is the undefined status of many "gray" activities which may acquire special importance as a result of technical and organizational innovations. In part, these are the surveillance activities already referred to, which may be swelled by the undertaking of new types of surveillance in new locations. In part these are actual or potential activities in support of political action. The status of these "gray" activities is apt to become more doubtful as the American military establishment abroad shrinks in numbers, and its freedom of action in foreign countries is increasingly hampered by political developments. The point to be made here is that uncertainty concerning the jurisdictional authority for "gray" activities should not be allowed to hamper our pursuit of rewarding innovation. This Agency, it is believed,

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should be increasingly willing to station civilian personnel in remote locations, to use indigenous personnel in its own direct employ, and to cooperate with foreign governments in both intelligence gathering and political action programs. This willingness should be assumed in a search for new ways of doing the Agency's business.

5. The Specific Proposal: The foregoing exposition of an organizational approach and a substantive emphasis believed to be promising in an effort to stimulate radical innovation leaves many practical questions unanswered. Accordingly, the following is an outline of the specific arrangements proposed. It is assumed that these arrangements would be operated in accordance with the general principles set forth above.

a. There should be established in the Office of the DCI a new position for a Special Assistant to the Director for Planning and Development. He should have broad directive authority with respect to research and development activities in all components of the Agency (as explained in sub-paragraph b. below) and full line of command authority over the Technical Services Staff (subject, however, to a special arrangement with the DD/P as explained in sub-paragraph c. below).

b. The SA/PD's general directive authority should empower him to review research and development programs, direct modifications therein, approve or disapprove specific projects, or direct the undertaking of projects. This power should be limited, however, to the reallocation between projects of personnel and funds in any component already committed or proposed to be committed to research and development activities. Thus the SA/PD would not be empowered to direct, say, the Office of Communications to engage in research and development activities on a scale that would require diversion of funds from other activities. The offices mainly affected by this directive would be the Office of Communications, Office of Scientific Intelligence, [redacted] of the FI Staff, DDP, and certain elements of the PP Staff, DD/P, [redacted]  
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c. The Technical Services Staff is the principal component of the Agency that is concerned with research and development. As such it is appropriate that it should report to the SA/PD. Thus situated it could serve as his staff and render unnecessary the creation of any new separate group. On the other hand, a considerable portion of its activities consist of support to the Clandestine Service rather than research and development. For many reasons it would be undesirable to try to split TSS in two parts (at least at this time). Accordingly, with respect to all of those activities which are primarily support to the Clandestine Service, the SA/PD should report through the Deputy Director (Plans)

d. The SA/PD should have considerable latitude to direct the reallocation of funds and personnel engaged in research and development, and of specific research and development projects between components of the Agency, or to direct their transfer to special project status. Such action should require the concurrence of the appropriate Deputy Directors since it could affect the non-research and development functions of the components concerned or the administrative and other support required by them. With the concurrence of the appropriate Deputy Directors, a transfer of this character should not require the approval of the DCI unless it involves an important organizational change or an important deviation from normal Agency practice, (such as the creation of a special project or the granting of unusual authorities). The authority covered in this paragraph and the limitations therein should apply to transfers between the Agency and proprietaries thereof except that all such transfers should require the approval of the DCI.


e. The SA/PD should be authorized to approve projects for presentation to the PRC (or for DCI approval without PRC action if the DCI so determines) without extensive lateral coordination except to the extent that the interests of the DD/F, DD/I, or DD/S are plainly involved.

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f. The SA/PD should be permitted to authorize direct contracting by TSS with suppliers in specific cases where this procurement procedure will simplify or accelerate desired action. It is contemplated that this authorization will be used most sparingly unless it appears that normal procedures are excessive burdensome.

  
RICHARD M. BISSELL, JR. ✓  
Special Assistant to the Director  
for Planning

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cc: D/DCI  
DD/P

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MEMORANDUM FOR:

DDI  
DDC  
DDA

Herewith is my long promised proposal concerning research and development and the stimulation of innovation in the Agency. I would very much appreciate your reaction at an early date since I feel we should move soon on this if we are going to move at all.

  
 RICHARD M. BARNETT, JR.  
 SA/P/DCI

16 Nov. 1957  
 (DATE)

FORM NO. 101 REPLACES FORM 10-101  
 1 AUG 54 WHICH MAY BE USED.

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MEMORANDUM FOR: MR. DULLES

Copies of the attached have also been distributed to the DD/I, DD/C and the IG. As you will recall it was agreed that we would again discuss this paper at the Deputies' Meeting on 25 November. General Cabell has seen it.

  
 22 Nov

(DATE)

FORM NO. 101 REPLACES FORM 10-101  
 1 AUG 54 WHICH MAY BE USED.

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